



# Election Systems & Software

MAINTAINING VOTER CONFIDENCE.  
ENHANCING THE VOTING EXPERIENCE.

EXPERIENCE  
RELIABILITY  
SECURITY  
INNOVATION

11208 John Galt Boulevard · Omaha, NE 68137 USA

Phone: 402.593.0101 · Toll-Free: 1.800.247.8683 · Fax: 402.593.8107

www.essvote.com

September 19, 2008

The Honorable Lowell Finley  
Deputy Secretary of State for Voting Systems Technology & Policy  
Office of the Secretary of State  
1500 11<sup>th</sup> Street, 6<sup>th</sup> Floor  
Sacramento, CA 95814

## **RE: ES&S Model 650 Hardware Component Change Notification**

Dear Deputy Secretary Finley,

Pursuant to California Elections Code 19213, Election Systems & Software, Inc. ("ES&S") hereby provides notice to the Secretary of State of certain modifications made to the hardware on the ES&S Model 650 central tabulator ("M650"). The subject modifications are being made primarily due to parts availability from relevant suppliers. The M650, which was previously tested and certified by the State of California, was Hardware Revision 1.1. Two components of Hardware Revision 1.1 are no longer being produced by the original suppliers. In order to continue producing the M650 for future sales or to repair existing units, ES&S has replaced each part with functionally equivalent components. It is important to note that this hardware revision is independent from the current certified firmware and the resulting M650 hardware configuration will be labeled as Hardware Revision 1.2. These revisions were recently reviewed and recommended for certification approval by Mr. Steve Freeman on behalf of the State of Oregon.

ES&S hereby submits documentation, which details the modifications made from the previously federally qualified and state certified hardware version of the M650. These modifications are documented in Engineering Change Orders ("ECO"s), and each modification has been inspected and approved by the federally qualified testing facility, SysTest Laboratories. Both the ECOs and SysTest Laboratory test results are also enclosed with this letter. A full description of the ECO process and subsequent testing lab approval process is also included as Attachment A to this letter. We have also provided an overview of the accompanying documentation as Attachment B to this letter.

It is ES&S' intention to fulfill any future orders and to use the new components in warranty and maintenance work for our California customers. Prior to the future sales or any maintenance work on existing units, we respectfully request your offices' written determination that the hardware modifications described herein that constitute Hardware Revision 1.2 do not impair the M650's accuracy and efficiency sufficient to require a reexamination and reapproval and as such may be used in the State of California.



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Please review the accompanying documentation and if you have any questions, do not hesitate to contact me at your earliest convenience.

Sincerely,

Mark Manganaro

Mark Manganaro  
California State Certification Manager

cc: Steve M. Pearson, ES&S Vice President, Certification  
Jim Schmidt, ES&S Vice President, Manufacturing  
Janet Buchanan, ES&S Director Account Services  
Bryan Hoffman, ES&S Account Services Manager



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### Attachment A An Overview of the ECO process

When modifications to hardware are initially proposed, ES&S first requests a review of the modification(s) by the federally accredited Independent Testing Authority ("ITA") that performed the original qualification review of the subject system or component. Detailed descriptions of the proposed hardware modifications are documented in Engineering Change Orders ("ECO"s). An ECO is submitted to the ITA when a manufacturer is required to modify the qualified hardware due to reasons such as discontinued components or design updates for efficiencies of manufacturing and/or serviceability. The intent of the ECO process is to provide for the review and approval of minor hardware modifications to a qualified voting system, that is, modifications that are considered to be *de minimis*, (i.e. those that do not affect the form, fit, or function of the voting system), without affecting the voting system's existing federal qualification. All proposed ECOs must be reviewed by the ITA that performed the original qualification testing. NASED empowered the ITAs with the discretionary authority to determine if the proposed updates or modifications are in fact *de minimis* changes and therefore do not affect the voting system's existing qualification. Upon submission, the ITA analyzes the ECO and determines what, if any, testing should be performed. This can range from no testing to a full battery of tests and issuance of a new NASED qualification number.

Once the ITA completes its tests, the results of the analysis are recorded on the ECO form. Those are then transmitted to the vendor and the vendor may proceed accordingly based upon the results of those tests and the direction from the ITA. It is significant to note that if the hardware changes are *de minimis* in nature, no new voting system is created, no new NASED qualification number is required or assigned and the vendor is allowed to proceed with its manufacturing process under the premise that the system is still NASED qualified.

All modifications to M650 Hardware Revision 1.1 were submitted and reviewed by SysTest Laboratories. SysTest Laboratories approved M650 Hardware Revision 1.2 as functionally equivalent and determined that a new NASED qualification number would not be required as all modifications were deemed as functionally equivalent to the Hardware Revision 1.1 components. We have included copies of SysTest's approved ECOs with this letter, as well as all relevant test material, for your review and records.

**Attachment B**  
**Overview of Documentation for Modifications Made From**  
**M650 Hardware Revision 1.1 to 1.2**

1. **Folder 01\_Cover Letter**
2. **Folder 02\_New Compact Flash**
  - a. **ESS ECO 696 & ECO 757**

**Description of Change** - Change of compact flash memory card, due to end of life of SanDisk brand.

    - i. SysTest determined that the new compact flash card does not constitute a De Minimis change and that testing was required. All tests were successful. Testing material from SysTest has been provided.
    - ii. SysTest determined that vendor documentation changes were not required.
3. **Folder 03\_Printer and PMS board Change**
  - a. **ECO 716 & ECO 718**

**Description of Changes**

    - Change of peripheral printer, due to end of life
    - Change of Pick Motor Solenoid board, to improve upon static discharge levels
    - Change of UPS, due to availability
    - i. SysTest determined that these changes do not constitute a De Minimis change and that testing was required. All tests were successful. Testing material from SysTest has been provided.
    - ii. SysTest determined that changes to vendor documentation were not required.
4. **Folder 04\_New Label**
  - a. **ECO 689 & ECO 731**

**Description of Change** - Change of label, to meet 2005 VVSG standards

    - i. SysTest determined that the change in label constitutes a De Minimis change and that testing was not required.
    - ii. SysTest determined that changes to vendor documentation were not required.